

CHELSEA CREEK COMMUNITY BASED COMPARATIVE RISK ASSESSMENT



**CHELSEA CREEK ACTION GROUP
U.S. ENVIRONMENTAL PROTECTION AGENCY**

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CHelsea Creek Community Based Comparative Risk Assessment

TABLE OF CONTENTS

Executive Summary	1
Introduction	5
1. Chapter 1: Water Quality	10
1. Overview of Water Quality in the Chelsea Creek	
2. Review of Existing Chelsea and East Boston Water Quality Information	
Table 1: Class SB Water Quality Standard	
3. Analysis of Existing Water Quality Data	
Table 2: Water Quality Sampling Parameters And Frequency By Year	
4. Potential Concerns for Public Health and the Environment	
5. GIS Maps of Available Water Quality Data & Information	
6. Current Water Quality Projects or Activities in Chelsea and East Boston	
7. Greatest Water Quality Concerns for Chelsea and East Boston Residents	
8. Recommendations to Address the Greatest Water Quality Problems	
9. Contact List	
2. Chapter 2: Ambient Air Quality	18
1. Overview of Ambient Air Quality in the Chelsea Creek Community	
2. Review of Existing Chelsea and East Boston Ambient Air Quality Information	
Table 3: Estimated Annual Average Ambient Concentration in Suffolk County	
Figure 1: Contribution to Ambient Air HAP Concentrations	
3. Analysis of Existing Air Quality Data	
4. Potential Concerns for Public Health and the Environment	
Table 4: Sources and Potential Effects of Criteria Pollutants	
Table 5: Air Toxics of Greatest Concern in New England	
Table 6: Chemicals Reported to the EPA Toxic Release Inventory	
5. GIS Maps of Available Air Quality Data and Information	
6. Current Air Quality Projects or Activities in Chelsea/East Boston	
7. Greatest Air Quality Concerns for Chelsea and East Boston Residents	
8. Recommendations to Address the Greatest Air Quality Problems	
9. Contact List	
3. Chapter 3: Open and Green Space	30
1. Overview of Open and Green Space in the Chelsea Creek Community	
2. Review of Existing Chelsea and East Boston Open/Green Space	
Table 7: Open Space in East Boston	
Table 8: Open Space in Chelsea	

3.	Analysis of Existing Open Space Data Figure 2: Open Space in the Boston Area	
4.	Potential Concerns for Public Health and the Environment	
5.	GIS Maps and Open Space Data	
6.	Current Open Space Projects and Activities	
7.	Open Space Concerns for Chelsea and East Boston	
8.	Recommendations for Open and Green Space	
9.	Contact List	
4.	Chapter 4: Respiratory Disease	40
1.	Overview of Respiratory Disease Table 9: Common Respiratory Disease	
2.	Review of Existing Chelsea and East Boston Data on Respiratory Disease Table 10: Asthma Rates per 1000 Individuals 1994-1999 Table 11: Total Pediatric Asthma Cases 1994-1999 Table 12: Cancer of the Lung or Bronchus in Chelsea, Massachusetts Table 13: COPD Hospital Discharges and Deaths in Chelsea	
3.	Analysis of Existing Data	
4.	GIS Maps of Available Asthma Data and Information	
5.	Current Asthma Projects or Activities in Chelsea/East Boston	
6.	Greatest Concerns Related Respiratory Disease for Chelsea and East Boston Residents	
7.	Recommendations to Address the Greatest Concerns Regarding Respiratory Disease Table 14: Recommendations to Reduce Asthma Attacks	
8.	Contact List	
5.	Chapter 5: Traffic	49
1.	Overview of the traffic in Chelsea Creek Community	
2.	Review of Existing Chelsea and East Boston Traffic Information Table 15: Average Daily Traffic Counts for Chelsea and East Boston Table 16: Truck Exclusions in Chelsea and East Boston	
3.	Analysis of Existing Traffic Data	
4.	Potential Concerns for Public Health and the Environment Table 17: Potential Health Implications of Vehicle Emissions	
5.	GIS Map of Available Traffic Data and Information	
6.	Current Traffic Projects or Activities in Chelsea and East Boston	
7.	Greatest Traffic Concerns for Residents	
8.	Recommendations to Address the Greatest Traffic Problems	
9.	Contact List	
6.	Chapter 6: Noise	59
1.	Overview of Noise in the Chelsea Creek Community	

	Table 18: Decibel Levels of Some Common Sounds
2.	Review of Existing Noise Pollution Information
3.	Analysis of Existing Noise Pollution Information
4.	Potential concerns for Public Health and the Environment
5.	GIS Maps of Available Noise Data and Information
6.	Current Noise Pollution Projects or Activities in Chelsea and East Boston
	Table 19: Public Health Concerns Related to Noise
7.	Greatest Noise Pollution Concerns for Residents
8.	Recommendations to Address the Greatest Noise Pollution Problems
9.	Contact List

Conclusion	69
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CHELSEA CREEK COMMUNITY BASED RISK ASSESSMENT

EXECUTIVE SUMMARY

I. Chelsea and East Boston: The need for the Chelsea Creek Comparative Risk Assessment

Both East Boston and Chelsea are low to moderate-income, diverse communities, with a large immigrant base. Both have been disproportionately impacted by industrial development and suffer from a disproportionately low percentage of open space and green space as compared to other communities in the Greater Boston region. The Chelsea Creek runs between Chelsea and East Boston. The Creek is a Designated Port Area, which requires that development along the Creek be reserved for marine industrial uses. The designation does not generally allow for public access or recreational use of any waterfront area; instead, the Creek is host to polluting industry, parking lots, a multi-ton salt pile, and fuel storage for industrial and commercial enterprises. There are also numerous 21E hazardous waste sites along the Creek and abandoned or contaminated property. These all contribute to the negative environmental and public health impacts of Chelsea and East Boston.

The Chelsea Creek Action Group (CCAG), local residents, and other community organizations lack easy access to the scientific information or data that is necessary to validate their claims of environmental pollution and public health threats; and have no access to data on the cumulative impact of the pollution emitted by all of the industries. This data is key when advocating to local, state, and federal agencies to address these problems. CCAG and the EPA sponsored the Chelsea Creek Community Based Comparative Risk Assessment so the East Boston and Chelsea communities could learn more about the environmental, public health, and social concerns they identified as community priorities and to develop strategies to address these issues.

II. The Chelsea Creek Community Based Comparative Risk Assessment (CRA)

CCAG, the East Boston Ecumenical Community Council, and U.S. EPA Region I sponsored a two-year community based Risk Assessment which gave residents of East Boston and Chelsea the opportunity to identify and make recommendations for the improvement of issues of greatest concern in the following three categories: environment, public health, and social issues. Risk Assessments typically inventory pollution and other sources of degradation that impact the quality of life or health of a community. The community based Comparative Risk Assessment that CCAG and the EPA sponsored was unique and innovative because rather than following the technical protocol, residents led the process and determined what they feel are the worst issues in those categories. Community members listed all of their concerns and then narrowed the entire list down to six priorities (three environment concerns, two public health concerns and one social concern): ambient air quality, water quality, open/green space, asthma and respiratory ailments, noise, and traffic. These six areas of concern were examined in a broad context, with attention focused on gathering and analyzing available data, and determining action steps to address some of the problems. With the guidance of residents, a committee of technical experts assessed the issues identified by the community and gathered existing information on each to develop a holistic look at the Chelsea Creek area in Chelsea and East Boston. The experts analyzed the risk of exposure, potential health impacts,

and how local, state, and federal agencies and regulations could improve the environmental and public health for Chelsea and East Boston residents.

III. Goals of the Comparative Risk Assessment (CRA)

There were several goals of the Chelsea Creek CRA: 1) to engage local residents and provide them with a baseline of information on potential exposures and risks from targeted environmental, public health, and social issues in East Boston and Chelsea; 2) to serve as a tool to help residents and community organizations understand environmental risks and use the information to prioritize action steps - community groups in East Boston and Chelsea have worked to mitigate environmental health risks for many years; the results of the Chelsea Creek CRA will compliment existing efforts and may also play a role in helping to determine future actions and citizen campaigns; and 3) to engage and inform government agencies (federal, state, and local) about the area and resource needs with the hope that these agencies will dedicate more resources (financial, technical, and staff) to the area.

IV. Key Chelsea Creek Comparative Risk Assessment Findings

1. ***Data on environmental and public health issues in East Boston and Chelsea is insufficient.*** There is very little existing data about the water quality of the Chelsea Creek, the level of pollutants in the air, asthma rates, or the burden of traffic. It is clear that more sampling and technical assistance is needed at a neighborhood level in order to help residents and community groups understand the quality of their air, water, land, and the public health implications.
2. ***Even when local data exists, the quality is unacceptable.*** Much of the current data collected on water quality and air emissions comes from industries that are essentially self-regulating; there is little independent verification of data or enforcement of existing regulations. This data may be skewed towards an industrial perspective of safety and health.
3. ***Current federal, state and local regulations do not adequately protect the health of urban residents or the quality of the environment.*** Regulation is enforced on an industry by industry basis; and therefore does take into consideration and/or address the cumulative environmental and public health impacts of the multiple sources of pollution. Regulations are enforced by many different governmental agencies which rarely share information. This is particularly problematic as proposals for new industry/development is reviewed by government agencies and there is no way to measure the added environmental/public health impacts to the already overwhelming existence of polluting industries. Furthermore, many regulations that have been created to protect public health and the environment are not being enforced for businesses in Chelsea and East Boston.
4. ***Actions are needed from local, state, and federal government agencies to address data gaps, information quality, and making measurable progress on issues.*** Filling existing data gaps would require more testing, surveying and analysis to a) make it possible to more accurately predict problems and link impacts (e.g. respiratory ailments) to direct causes (e.g. a

polluting business); and b) keep agencies accountable and present in the neighborhoods (such as the State Department of Environmental Protection and other agencies monitoring environmental and public health impacts).

5. ***Actions are needed from local residents to hold government agencies accountable for their roles and to make improvements on issues.*** In addition to constantly monitoring the actions or inactions of regulating agencies and advocating for more action by these agencies, residents must adjust their lifestyles in order to achieve the least amount of pollution (e.g. drive less or drive less polluting vehicles, recycle, etc.).

V. Next Steps and Continued Actions for the Chelsea Creek and the Communities of East Boston and Chelsea; and why you should get involved.

CCAG and the EPA intend for the CRA to be used by as many groups and people as possible – from CCAG to those fighting the new runway at Logan Airport, to our local boards of health, to activists in other urban areas who can learn lessons from East Boston and Chelsea. Copies of the Chelsea Creek CRA will remain in the public libraries in East Boston and Chelsea and at the offices of the Neighborhood of Affordable Housing (In East Boston), the Chelsea Green Space & Recreation Committee (in Chelsea), and US EPA Region I (based in Boston). It will also be posted on the Chelsea Creek Restoration Project website.

CCAG will advocate for further research in East Boston and Chelsea; implement many of the suggestions/recommendations and advocate that others also implement such changes. CCAG, working with Urban Ecology Institute, has already taken on many of the suggestions made in the Open Space chapter. The capacity of staff time and volunteer resources will determine the level of action on all other recommendations from the five remaining chapters.

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CHELSEA COMMUNITY BASED COMPARATIVE RISK ASSESSMENT

INTRODUCTION

The communities of Chelsea and East Boston are joined by the Chelsea River (the Creek), a body of water that flows through the Mystic River Watershed and into the Boston Inner Harbor. The Creek is a “Designated Port Area”, which requires that development along the Creek be reserved for marine industrial uses. The designation does not generally allow for public access or recreational use of any waterfront area. Instead, the Creek is host to industry, parking lots, a multi-ton salt pile, and fuel storage for industrial and commercial enterprises. Over time, these uses have given rise to numerous 21E hazardous waste sites along the Creek as well as abandoned or contaminated properties.

Local residents are aware of the environmental problems facing them each day, but do not have easy access to the scientific information or data that is necessary to validate their concerns to the local, state, and federal agencies responsible for addressing these problems. Two community organizations, Chelsea Green Space and Recreation Committee and Neighborhood of Affordable Housing, came together in 1997 as the Chelsea Creek Action Group to specifically address environmental issues related to the Creek. The Chelsea Creek Community Based Comparative Risk Assessment (CRA) was a two-year effort funded by US Environmental Protection Agency and the Greater Boston Urban Resources Partnership to involve and inform residents about environmental issues, gather and analyze available data on community-selected issues, and determine action steps to address some of the problems.

A Unique Approach to Understanding Community Risks

Risk Assessment is a tool created to compare and rank environmental problems based on the potential for environmental and public health impacts. Traditionally, risk assessments draw together a number of experts in fields such as toxicology, economics, and natural resources. These experts are expected to use “pure science” to assess the risk to public health from contaminants, and identify appropriate resource investment or mitigation measures. This approach does not generally allow for public participation or input into the process.

The Chelsea Creek Community-Based Comparative Risk Assessment (Chelsea Creek CRA) was intended to focus the limited amount of time and resources to address community priorities and concerns. The goal was to take the best components of a traditional risk assessment (gathering & analyzing existing data on environmental problems) and add a new component into the process – community involvement. Instead of only being informed of the end results of a project, residents would take center stage to select the issues to be addressed through the Chelsea Creek CRA. Residents would have a seat at the table and be involved in making decisions throughout the project. Another innovation for the Chelsea Creek CRA was to focus on identifying action steps that individuals, community groups, and government could work on to address existing problems. The result of this new approach was to create an information tool for Chelsea and East Boston communities to validate concerns, dispel misperceptions, understand the problems, and help guide the investment of their time to gain maximum benefit and results.

The Chelsea Creek Comparative Risk Assessment Process

In the first stage of the project, a Coordinating Committee was established to help design a workplan to guide the two-year process. Members of the Coordinating Committee included representatives from Chelsea Greenspace and Recreation Committee, Neighborhood of Affordable Housing, US EPA New England's Urban Environmental Program (UEP), and the Greater Boston Urban Resources Partnership. The workplan identified the following tasks for the project:

- Organize a process, leadership structure, and timeline for the Chelsea Creek CRA.
- To brainstorm, identify and prioritize environmental, health, and quality of life (social) issues that may be addressed by this project, begin establishing the structure of advisory committees and begin articulating criteria to evaluate risks.
- To narrow down and finalize the list of issues to be analyzed using preliminary screening criteria.
- To gather available data from multiple sources on each of the issues identified, analyze data, prioritize concerns, and identify format for chapter reports.
- To develop strategies and action steps to manage and minimize the risks identified and prioritized in earlier phases.
- To publicize the report results and appropriate action steps identified, generate public interest and input into the plan, and generate appropriate government support for action steps.

CCAG staff and volunteers engaged local residents to help identify key environment, public health and social issues that were important to residents for the project. 325 people (165 Chelsea residents, 154 East Boston residents, 6 did not specify) were interviewed or surveyed. The survey and questionnaire were not designed to collect demographic information about the respondents, however, 119 of the respondents (37%) either completed a survey in Spanish or otherwise identified themselves as primarily Spanish speaking. Once the survey was complete, the results were compiled into a report, and the results were publicized through two public meetings in December 2000. During those meetings, participating residents identified the following key topics of concern:

ENVIRONMENTAL ISSUES	PUBLIC HEALTH ISSUES	SOCIAL ISSUES
Open space Lack of trees Condor Street Air pollution Water quality Trash Not enough trash cans Dirty streets Odor Indoor air quality (Massport soundproofed homes) Salt pile Oil tanks Creek link to airport Heavy ship and oil traffic Environmental injustice Airport (pollution and noise) Brook & Havre Street restaurant lot (pollution & noise) Auto body shops - black smoke and spray painting on Condor Street (illegal parking)	Asthma Respiratory problems Cancer Rodents Drinking water quality Headaches Miscarriages Animal waste	Traffic Too many trucks Rude drivers Noise Parking Violence Gangs Gangs closely related to drugs Kids out late Drugs Lack of respect for people & property Police (not there when needed) Spitting Housing - affordability, Availability Families are leaving Hunger Pot holes/bad streets Blight Graffiti and vandalism Lack of accountability Inequality Chelsea as sacrifice area Cultural differences compared to others

In January 2001 the Coordinating Committee formed the two leadership committees that would work together to gather information and analyze results – the Resident Advisory Committee (RAC) and the Technical Advisory Committee (TAC).

The RAC was made up of volunteer residents from East Boston and Chelsea, the head of the TAC (EPA New England), and a coordinator from Neighborhood of Affordable Housing who led the meetings. This committee met approximately every six weeks for over a year, and played a leadership role in guiding and focusing research on the six issues, as well as reviewing chapters of the report. The RAC reviewed the list of issues generated through the surveys and public meetings and decided to create a set of criteria to determine which issues to focus on for the Chelsea Creek CRA. The criteria used to select the final issues were:

- Issues must be “visible”, a problem that residents can see, instead of a lack of something
- Issues must be equally pertinent to East Boston and Chelsea residents
- Issues must represent a community concern; frequency of times an issue was mentioned by people surveyed is important
- Issues should capture many impacts/players – an “umbrella” issue
- Should be an issue that needs research
- Report should not focus on Logan Airport, but other issues that may pose serious public health and environmental risk
- Group must have some level of control to affect change on the issue

The RAC reviewed all of the issues, discussed how they each related to the criteria, and voted to concentrate on the following issues for the report:

Environmental Issues	Public Health Issues	Social Issues
Ambient Air Quality Water Quality (in the Creek) Open & Green Space	Asthma/Respiratory Disease Noise	Traffic

In addition to addressing the six priority issues, the RAC members were interested in having one outcome of the project be a “resource guide” to provide residents information on critical stakeholders on issues of concern. The resource guide includes information on property ownership along the Creek, as well as information on State, City, and Federal programs and contacts and was developed by the RAC during this project.

The TAC included members from academia, non-profits organizations, state and federal agencies, local government, and health professionals, as well as the head of the RAC. Members provided technical assistance, information, and data on the targeted issues identified by the communities of Chelsea and East Boston (i.e. urban rivers, noise impacts, air quality). Each member of the technical committee served as a liaison to the resources and information of his or her organization and helped create and finalize chapters on each target issue. The TAC met on a monthly basis for over a year.

One of the many joint decisions that the committees had to make was to determine a format for presenting the data collected during the project. The groups decided on the following elements for each chapter:

1. Overview of issue (what the issue is, regulations, standards, etc.)
2. Review of existing Chelsea and East Boston specific data related to the issue
3. Brief analysis of existing data and potential concerns to public health and the environment
4. GIS maps of available data and information for Chelsea and East Boston
5. Current projects or activities in Chelsea and East Boston related to the issue
6. Greatest areas of concern for Chelsea and East Boston residents related to the issue
7. Opportunities to address the problems of greatest concerns
8. Contact List

After the chapters were drafted, the RAC and TAC had several opportunities to review, edit, and revise each chapter. The chapters greatly benefitted from input from this team approach to writing,

and resulted in a product that many had a hand in producing and are ready to put to use in future projects. In order to stay in contact with a larger group of residents to inform and engage them on the findings from the report, a series of information presentations were given at meetings or local community groups including CCAG, non-profit organizations, and churches. A final launch of the report findings is planned for Spring 2003, and meetings will be scheduled with local, state and federal agencies to share findings and seek their commitment to help implement target action steps. The report will be made available on the Internet, in hardcopy at public libraries in East Boston and Chelsea, and at the offices of Neighborhood of Affordable Housing and the Chelsea Human Services Collaborative.